

# User's Information Manual

## High Efficiency Upflow, Induced Draft Gas Furnace Model G5RC Condensing Furnace

**NORDYNE**

Manufacturer of

**INTERTECH**  
**INTERTECH**

and

**MILLER**  
products

### FOR YOUR SAFETY

**WARNING:** If the information in this manual is not followed exactly, a fire or explosion may result causing property damage, personal injury, or loss of life.

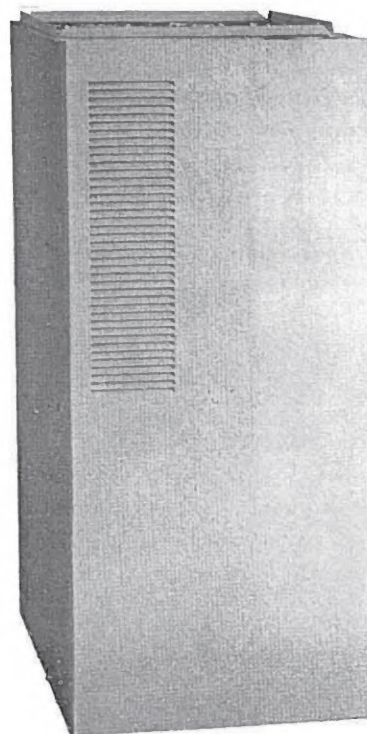
- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- **WHAT TO DO IF YOU SMELL GAS:**
  - Do not try to light any appliance.
  - Do not touch any electrical switch; do not use any phone in your building.
  - Immediately call you gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
  - If you cannot reach your gas supplier, call the fire department.
  - Extinguish any open flame.
- Installation and service must be performed by a qualified installer, service agency, or the gas supplier.

**ADVERTISSEMENT.** Quiconque ne respecte pas à la lettre le instructions dans le présent manuel risque de déclencher un incendie ou une explosion entraînant des dommages matériels, des lésions corporelles ou la perte de vies humaines.

- Ne pas entreposer ni utiliser de l'essence ni d'autres vapeurs ou liquides inflammables dans le voisinage de cet appareil, ni de tout autre appareil.
- **QUE FAIRE S'IL Y A UNE ODEUR DE GAZ**
  - Ne pas tenter d'allumer aucun appareil.
  - Ne toucher à aucun interrupteur électrique; n'utiliser aucun téléphone dans le bâtiment.
  - Appeler immédiatement le fournisseur de gaz en employant le téléphone d'un voisin. Respecter à la lettre les instructions du fournisseur de gaz.
  - Si personne ne répond, appeler le service des incendies.
- L'installation et l'entretien doivent être effectués par un installateur qualifié, un organisme de service ou le fournisseur de gaz.



*"Take it from me, Willard Scott, America's Weatherman. Follow these instructions and you'll get really great comfort from your NORDYNE equipment."*



### IMPORTANT

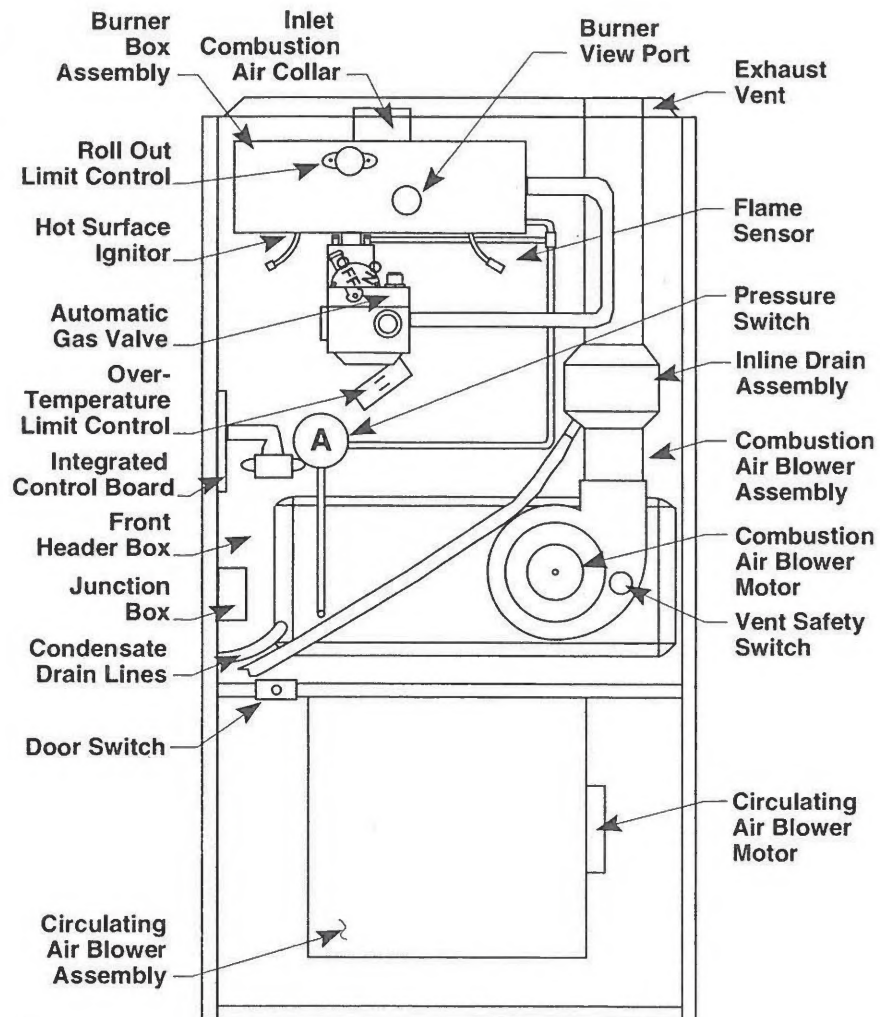
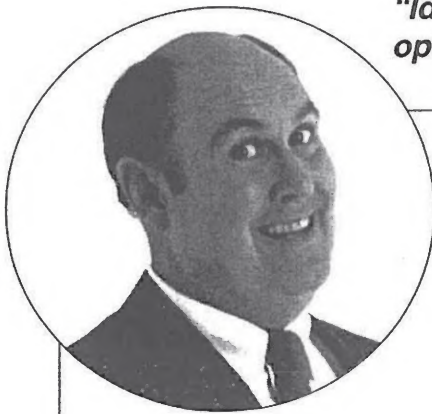
Read this owner information thoroughly before attempting to operate or maintain this furnace to become familiar with the capabilities and use of your heating appliance. Keep this with literature on other appliances where you have easy access to it in the future. If a problem occurs, check the instructions and follow recommendations given. If these suggestions don't eliminate your problem, call your NORDYNE Servicing Contractor (Service PRO).

Any additions, changes, or conversions required in order for the appliance to satisfactorily meet the application needs must be made by a qualified installer, service agency, or the gas supplier using factory specified and approved parts.



***"Identification of parts you need to know about in order to secure optimum performance from this appliance."***

**— Willard Scott**



**Figure 1. Furnace Parts Identified**

## GENERAL INFORMATION

This furnace has been designed and built to provide many years of safe and dependable home comfort, providing it is properly installed and maintained. With regular maintenance, this furnace will operate satisfactorily year after year. Abuse, improper use, and/or improper maintenance can shorten the life of the furnace and create hazards for you. Please read this manual carefully to familiarize yourself with operation, maintenance, and safety procedures for this furnace.

A regular service and maintenance schedule should be established to insure efficient and safe operation of the furnace. See Section 5 for maintenance procedures and schedules.

**Devices attached to the flue or vent for the purpose of reducing heat loss up the chimney, including field-installed draft inducers, have not been tested and have not been included in the design certification of this furnace. We, the manufacturer, can not and will not be responsible for injury or damage caused by the use of such untested and/or uncertified devices, accessories, or components.**

Be sure that the thermostat is properly installed and is not being affected by drafts or heat from lamps or other appliances.

## **⚠ WARNING:**

To avoid possible equipment damage, fire, or death, the following instructions must be observed regarding furnace location, combustion air requirements, and operation procedures.



## 1. Furnace Location

The furnace area and the vicinity of any other gas appliances must be kept clear and free of combustible materials, gasoline, and other flammable vapors and liquids. Do not store or use flammable items such as paint, varnish, or strippers in the vicinity of the furnace.

Do not use the furnace closet or area next to the furnace as a storage area. This area must be kept clear, clean, and free of lint. The furnace must also be kept clear of loose or exposed insulation materials. Examine the furnace area when the furnace is installed or when insulation is added, since some insulation materials may be combustible.

Do not use this furnace if any part has been under water. Immediately call a qualified service technician to inspect the furnace and to replace any part of the control system and any gas control which has been under water.

Familiarize yourself with the controls that shut off the gas and electrical power to the furnace. If the furnace is to be shut down for an extended period of time, turn off both the gas and electrical power. For your safety always turn off both the gas and electrical power before performing service or maintenance on the furnace.

## 2. Combustion Air Supply

A furnace needs an adequate supply of combustion and ventilation air for proper and safe operation. This furnace is a direct vent furnace and therefore requires outside air for combustion. Follow the installation instructions included with the furnace to properly vent air to the combustion air inlet and exhaust the products of combustion to the outside from the exhaust vent.

If the furnace is operated with a restricted combustion air supply, the pressure switch will open, turning off

the gas supply to the burners. (See Figure 1). **DO NOT** install a jumper wire across this switch to defeat its function. If this switch must be replaced, use only the replacement part specified in the Replacement Parts List.

Air openings in warm air registers, and return air grilles must not be restricted.

### **CAUTION:**

**Combustion air must not be drawn from a corrosive atmosphere.**

To maximize heat exchanger life, the combustion air must be free of chemicals which form corrosive acidic compounds in the combustion gases. Some examples of these chemicals are chlorine, fluorine, and sulphur. Some common sources of these chemicals are detergents, bleaches, aerosol sprays, cleaning solvents, and a wide variety of commercial and household products.

## 3. Return Air Supply

In applications where the supply ducts carry heated air to areas outside the space in which the furnace is installed, the return air must be delivered to the furnace by duct(s) sealed to the furnace casing, running full size and without interruption to the outside of space in which the furnace is installed.

The return air duct connection(s) must be physically sound and sealed to the furnace casing to prevent products of combustion from entering the living space. Use a cleanable type high velocity air filter in the return air duct to maintain a clean heat exchanger.

### **WARNING:**

**Failure to prevent products of combustion from being circulated into the living space can create potentially hazardous conditions including carbon monoxide poisoning that could result in personal injury or death.**

The floor or platform on which the furnace is mounted must provide sound physical support of the furnace with no gaps, cracks, or sagging between the furnace and floor or platform. The return air and circulating air ductwork must not be connected to any other heat producing device such as a fireplace insert, stove, etc. Doing so may result in fire, explosion, personal injury, carbon monoxide poisoning, or property damage.

## 4. Vent System

The furnace must always be connected to an approved vent pipe to carry combustion products outdoors. At the beginning and end of each heating season, inspect the outdoor vent terminal closely with a flashlight.

### **WARNING:**

**Do not operate your furnace if you find any of the following conditions since toxic fumes can escape into your home:**

- Obstructions or restrictions in the vent pipe and/or chimney.
- Holes in the vent pipe.
- Cracks in the vent pipe.
- Visible corrosion in the vent pipe.
- Horizontal vent pipes that do not slope upward.

**If any of the above conditions are found in the vent pipe, call a qualified service technician to install new vent pipe.**

## 5. Maintenance

Proper maintenance is most important to achieve the best performance from a furnace and should be performed by a qualified service technician. Follow the maintenance schedule in the table and the instructions below for years of safe, trouble free operation.



- Do not place combustible materials on or against the furnace cabinet.
- Do not store gasoline or any other flammable vapors and liquids in the vicinity of the furnace.
- Annually inspect the furnace, ductwork, and vent system for signs of physical deterioration.
- Change or replace the air filters monthly during any period when the circulating blower is operating regularly.
- Always replace the doors on the furnace after servicing or cleaning/changing the filters. Do not operate the furnace without all doors and covers in place.
- Avoid operating the furnace when windows and doors are open.
- Be sure that the thermostat is properly installed and is not being affected by drafts or heat from lamps or other appliances.

**Air Filter(s)** — The installer should provide a filter rack for a high velocity type cleanable filter in the return air duct adjacent to the furnace. Filters should be cleaned or changed monthly during the heating season. New or newly renovated homes may require more frequent changing until the construction dust has been removed.

Always replace the door on the furnace after servicing or the unit. Do not operate the furnace without the door in place.



### **WARNING:**

Never operate the furnace without a filter in place. Dust and lint in the return air can build up on the internal components, resulting in a loss of efficiency, equipment damage, and possible fire risk.

**Lubrication** — The bearings in the circulating air blower motors used in these furnaces are pre-lubricated and sealed at the factory. No further oiling of the bearings is required for the life of the motor.

**Blower Compartment** — The blower compartment should be cleaned monthly during the heating and cooling seasons to remove any dirt and lint that may have accumulated in the compartment or on the blower and motor. Build-up of dirt and lint on the blower and motor can create excessive loads on the motor resulting in higher than normal operating temperatures and possible shortened service life.

**Burner Maintenance** — Check the burner flames at the start of every heating season. Set the thermostat to a temperature setting above the room temperature. Remove the louvered door to the furnace and visually inspect the burner through

MAINTENANCE ITEM	FREQUENCY OF MAINTENANCE			
	BEGINNING OF EACH HEATING SEASON	END OF EACH HEATING SEASON	MONTHLY	EVERY SIX MONTHS
VERIFY FURNACE AREA IS FREE OF COMBUSTIBLE MATERIALS	X	X	X	
VERIFY COMBUSTION AND VENTILATION AIR IS NOT RESTRICTED	X	X	X	
VERIFY NO SIGNS OF PHYSICAL DETERIORIZATION OF THE FURNACE	X	X	X	
VERIFY NO OBSTRUCTIONS OR RESTRICTIONS IN VENT OR CHIMNEY	X	X		
VERIFY NO HOLES OR CRACKS IN VENT PIPE	X	X		
VERIFY NO CORROSION IN VENT PIPE	X	X		
VERIFY THAT HORIZONTAL VENT PIPES SLOPE UPWARDS AWAY FROM FURNACE	X	X		
VERIFY BURNER FLAME	X			
CLEAN OR REPLACE FILTER(S)			X	
CLEAN BLOWER COMPARTMENT			X	
CLEAN BURNER VESTIBULE	X			



the view hole to make sure that the flame is drawn into the center of the heat exchanger tube (See Figure 3). In a properly adjusted burner assembly, the flame bends down and to the right at the end of the heat exchanger tube, and the end of the flame will be out of sight around the bend. The flame color should be blue, however some light yellow streaks may occur on the outer portions of the flame.

### **! CAUTION:**

Some components in the burner vestibule are at high temperatures while the burners are operating. Use caution to avoid personal injury.

#### **Drain/Trap Inspection -**

**Burner Maintenance (NOx)** — The efficient operation of this furnace causes the condensation of water from the flue gases. This condensation collects in the front header box and will drain from the left side into the trap assembly. (See installation instructions for installation of trap and condensate drain.) Prior to operating furnace, the trap **MUST** be filled with water. This provides consistent drainage and assures smooth furnace operation. Verify that all drain lines are tight and secure.

## **6. Operating Instructions**

**FOR YOUR SAFETY READ  
PAGE 6 BEFORE OPERATING.**

### **! WARNING:**

Should overheating occur, or the gas supply fail to shut off, shut off the manual gas valve to the furnace before shutting off the electrical supply.

### **! ADVERTISSEMENT:**

En cas de température excessive, ou s'il est impossible de couper l'alimentation en gaz, fermer le robinet manuel d'alimentation en gaz du générateur d'air chaud avant de couper l'alimentation électrique.

This furnace is equipped with a roll out limit vent safety switch and a pressure switch (See Figure 1). The pressure switch acts to verify that the burner flame is being drawn into the heat exchanger tubes. If the burner flame is not being drawn into the heat exchanger tubes, the roll out limit switch, or flame sensor, will open and shutdown the unit.

The vent safety switch acts to shut the furnace down in the event of an overtemperature condition to protect the PVC flue system and inducer blower.

**Furnace Fails To Operate** — If the furnace does not operate, check the following:

- 1) Is the thermostat operating properly?
- 2) Is the blower door in place?
- 3) Is the furnace disconnect closed?
- 4) Has the circuit breaker tripped (or fuse blown)?
- 5) Is the gas turned on?
- 6) Is the manual shut-off valve open?
- 7) Is the filter dirty or plugged?
- 8) Is the trap filled with water?
- 9) Does the pressure switch close when the combustion air blower comes on?

If the combustion and circulating air blowers are operating, and items 1 through 8 have been checked without identifying the cause of the problem, press the red reset button on the vent safety limit and on the roll out limit switch. (See Figure 1).

**IMPORTANT:** If the furnace operates after depressing the reset button on the vent limit or roll out limit, it is an indication of a potentially serious problem in the installation. Contact a qualified serviceman to identify and repair the problem.

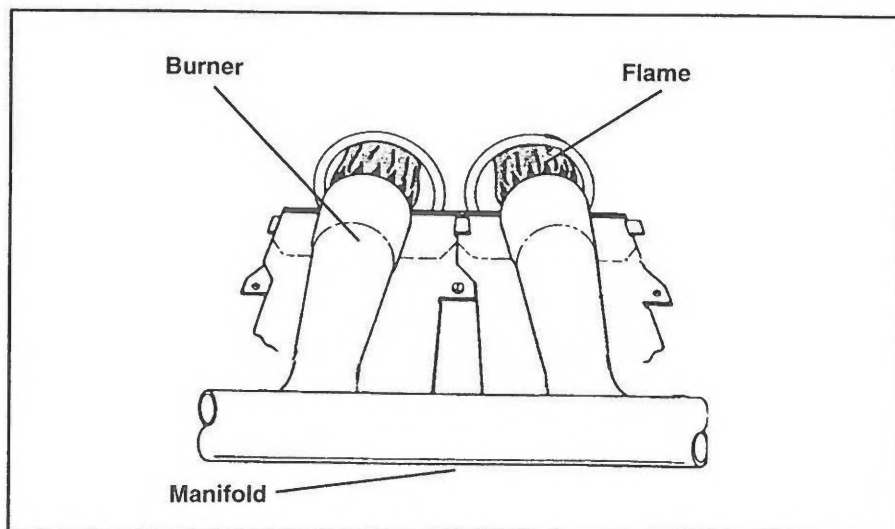


Figure 2. Burner Inspection.



## FOR YOUR SAFETY READ BEFORE OPERATING

**WARNING:** If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury, or loss of life.

- A. This appliance does not have a pilot. It is equipped with an ignition device which automatically lights the burner. Do not try to light the burner by hand.
- B. BEFORE OPERATING smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.

### WHAT TO DO IF YOU SMELL GAS

- Do not try to light any appliance.
  - Do not touch any electrical switch; do not use any phone in your building.
  - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
  - If you can't reach your gas supplier, call the fire department.
- C. Use only your hand to push in or turn the gas control lever. Never use tools. If the lever will not push in or move by hand, do not try to repair it, call a qualified service technician. Force or attempted repair may result in a fire or explosion.
- D. Don't use this appliance if any part has been under water. Immediately call a service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

## POUR VOTRE SÉCURITÉ. À LIRE AVANT L'EMPLOI

**ATTENTION!** L'inobservation de ces instructions peut entraîner un incendie ou une explosion pouvant causer des dommages à votre propriété à votre personne, ou la mort.

- A. Cet appareil ménager n'a pas de veilleuse. Il est doté d'un système d'allumage automatique. Ne pas essayer d'allumer le brûleur manuellement.

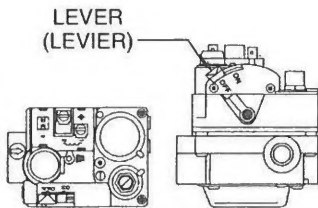
- B. AVANT L'USAGE. Attention à une possible odeur de gaz surtout au niveau du plancher où les gaz les plus lourds ont la tendance de se concentrer.

### EN CAS D'ODEUR DE GAZ.

- Ne mettre en marche aucun appareil électrique.
  - Ne toucher à aucun commutateur électrique, ne pas employer le téléphone.
  - Quitter le bâtiment immédiatement et avvertir la compagnie du gaz en utilisant le téléphone d'un voisin.
  - A défaut de la compagnie du gaz, avvertir le service des pompiers.
- C. Tourner le robinet à gaz levier. Ne jamais employer d'outils. En levier de difficulté, ne pas essayer de le réparer vous-même. Appeler un spécialiste. Forcer ou tenter de réparer le robinet peut entraîner une explosion ou un incendie.
- D. Il est déconseillé d'utiliser cet appareil en contact prolongé avec l'eau. Faire inspecter ou remplacer toute commande par un technicien qualifié si un des systèmes de contrôle du gaz s'est trouvé sous l'eau.

## OPERATING INSTRUCTIONS

1. STOP! Read the safety information above on this label.
2. Set the thermostat to lowest setting.
3. Turn off all electrical power to the appliance.
4. The appliance's ignition device automatically lights the burner. Do not try to light burner by hand.
5. Remove louvered door of furnace.
6. Push lever in slightly and move left to OFF. (See Figure)
7. Wait five (5) minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, STOP! Follow "B" in above information. If you don't smell gas, go to next step.
8. Push lever in slightly and move to "ON". (See Figure)
9. Replace louvered door.
10. Turn on all electrical power to the appliance.
11. Set the thermostat to a desired setting.
12. If the appliance will not operate, follow the instructions "To Turn Off Gas To Appliance" and call your service technician.



FIGURE

## MODE D'EMPLOI

1. ATTENTION! Lire d'abord la liste des mesures de sécurité ci-dessus.
2. Mettre le thermostat à la position minimale.
3. Couper le courant électrique qui mène à l'appareil.
4. Cet appareil ménager étant doté d'un système d'allumage automatique, ne pas essayer d'allumer le brûleur manuellement.
5. Retirer la porte à volets d'aération de la chaudière.
6. Pousser légèrement le levier et le déplacer vers la gauche pour l'amener sur OFF (ARRÊT). (Voir la Figure)
7. Attendre cinq (5) minutes pour s'assurer de la dissipation du gaz.  
En cas d'odeur, ARRÊTER LE PROCÉDÉ. Suivre les instructions ci-dessus (Section B). En l'absence de toute odeur de gaz, avancer à l'étape suivante.
8. Pousser légèrement le levier et le déplacer vers la droite pour l'amener sur ON (MARCHE). (Voir la Figure)
9. Remettre en place la porte à volets d'aération de la chaudière.
10. Rebrancher l'appareil sur le réseau électrique.
11. Ajuster le thermostat à la position désirée.
12. Si l'appareil ne fonctionne pas, suivre les "Directives d'arrêt" ci-dessous et appeler le technicien de service.

## TO TURN OFF GAS TO APPLIANCE

1. Set the thermostat to the lowest setting.
2. Turn off all electrical power to the appliance if service is to be performed.
3. Remove louvered door of furnace.
4. Push lever in on gas valve slightly and move to the left to OFF. Do not use force. (See Figure)
5. Replace louvered door of furnace.

## DIRECTIVES D'ARRÊT

1. Mettre le thermostat à la position minimale.
2. Débrancher l'appareil en prévision de la réparation.
3. Retirer la porte à volets d'aération de la chaudière.
4. Pousser légèrement le levier et le déplacer vers la gauche pour l'amener sur OFF (ARRÊT). Ne pas forcer. (Voir la Figure)
5. Remettre en place la porte à volets d'aération de la chaudière.



## **MANUFACTURER WARRANTY, OWNER RESPONSIBILITIES**

It is the sole responsibility of the homeowner to make certain the gas furnace has been correctly set up and adjusted to operate properly.

NORDYNE warrants the furnace to be free from defects in material or workmanship for a period of one year. A warranty certificate with full details is included with the furnace. However, NORDYNE will not be responsible for any costs found necessary to correct problems due to improper set-up, improper installation, furnace adjustments, improper operating procedure on the part of the user, etc.

Some specific examples of service calls which cannot be included in warranty payments are:

1. Repairing duct work in the home found to be faulty.
2. Correcting wiring problems in the electrical circuit supplying the furnace.
3. Re-setting circuit breakers or other switches.
4. Correction of problems due to improper gas supply pressure to the furnace.
5. Providing instructional training on how to light and operate the furnace.

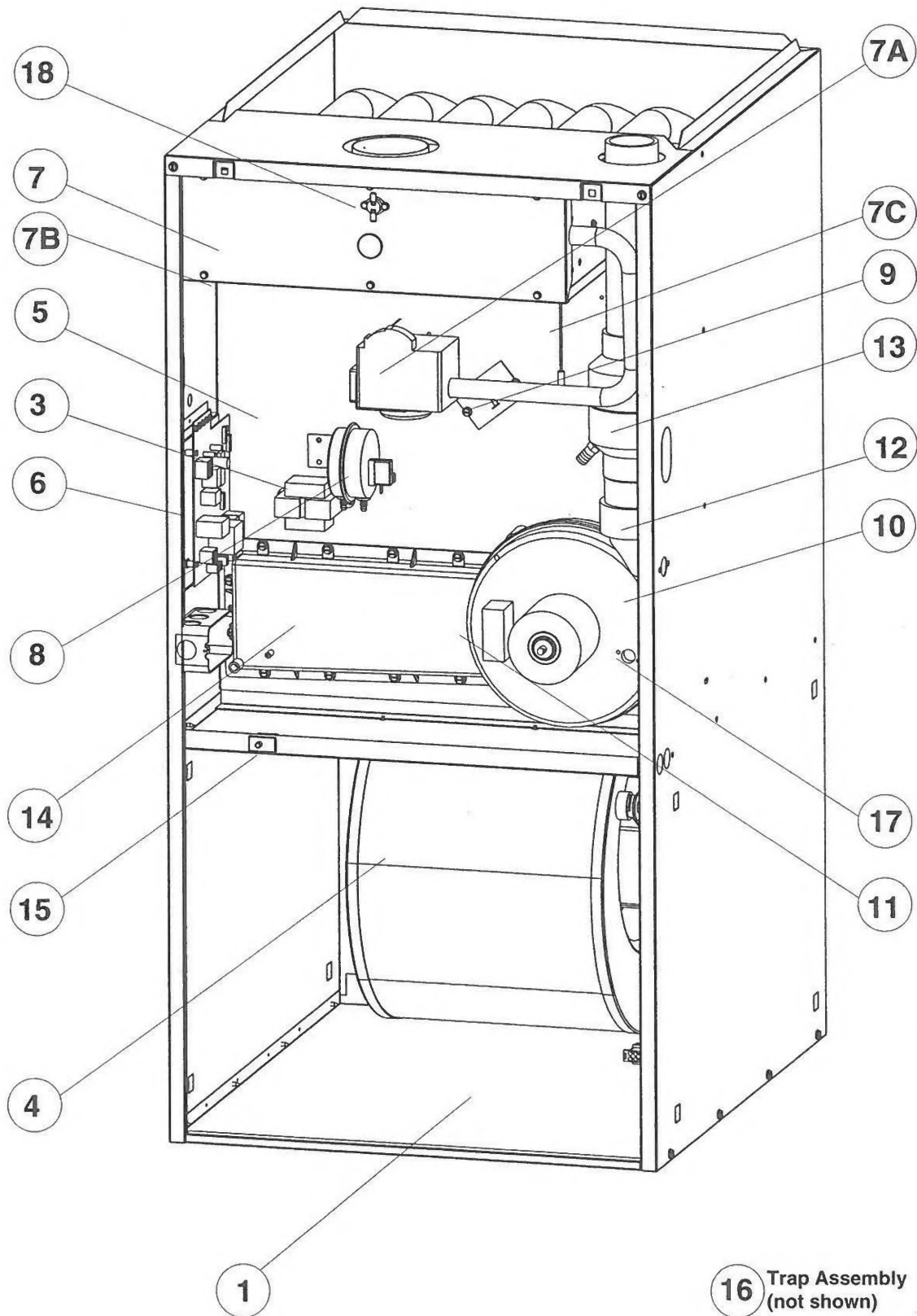
6. Furnace problems caused by installation of an air conditioner, heat pump, or other air comfort devices.
7. Revising installation of the vent assembly.
8. Adjusting or calibrating of the thermostat.

Carefully review these responsibilities with your dealer, service company, or gas supplier so there will be no misunderstanding at a later time.

### **Read Your Warranty**

Please read your limited warranty completely. It contains valuable information about your furnace. If you have any questions about the warranty information, contact your NORDYNE distributor.

2 Door (Not Shown)





# Residential Condensing Furnace Model G5RC

ITEM		MODEL AND PART NUMBERS					
NO.	DESCRIPTION	G5RC-040	G5RC-060	G5RC-080	G5RC-100	G5RC-120-16	G5RC-120-20
1	CABINET, BOTTOM	372671	372671	372672	372672	372673	372673
2	DOOR, ACCESS-GREY	902656	902656	902657	902657	902658	902659
3	TRANSFORMER	621486	621486	621486	621486	621486	621486
4	BLOWER ASSEMBLY	902131	902131	902344	902344	902344	902344
4A	MOTOR-1/3 H.P.	902127	902127				
	MOTOR-1/2 H.P. (10 x 10 HSG.)			902128	902128	902128	
	MOTOR-3/4 H.P. (11 x 10 HSG.)						902346
4B	BLOWER WHEEL	667037	667037	667207	667207	667207	667227
4C	CAPACITOR	620273	620273	620233	620233	620233	620233
4D	MOTOR MOUNT						668781
5	HEAT EXCHANGER ASSEMBLY	493821	493822	493823	493824	493825	493825
6	INTEGRATED CONTROL BOARD	902378	902378	902378	902378	902378	902378
7	BURNER BOX ASSEMBLY	493870	493880	493890	493900	493810	493910
7A	GAS VALVE	624506	624506	624506	624506	624506	624506
7B	IGNITOR	902661	902661	902661	902661	902661	902661
7C	FLAME SENSOR	632143	632143	632143	632143	632143	632143
7D	ORIFICE, NATURAL GAS #44	660796	660796	660796	660796	660796	660796
7E	BURNER	660812	660812	660812	660812	660812	660812
8	PRESSURE SWITCH <small>NOTE: If furnace has a #632200 Switch, replace with same part no.</small>	632252	632252	632252	632252	632252	632252
9	LIMIT SWITCH (150°F)	626418					
	LIMIT SWITCH (165°F)						626390
	LIMIT SWITCH (195°F)					626419	
	LIMIT SWITCH (175°)		626424		626424		
	LIMIT SWITCH (210°)			626425			
10	BLOWER, INDUCER (with gasket)	902655	902655	902655	902655	902655	902655
11	ORIFICE, INDUCER (1" DIA)	151885				N/A	N/A
	ORIFICE, INDUCER (1.25" DIA)		151882				
	ORIFICE, INDUCER (1.50" DIA)			151886			
	ORIFICE, INDUCER (1.63" DIA)				151884		
12	COUPLING, NEOPRENE	668916	668916	668916	668916	668916	668916
13	IN-LINE DRAIN ASSEMBLY	371890	371890	371890	371890	371890	371890
14	BOX, HEADER OUTLET PLUS SEALANT	902383	902383	902384	902384	902385	902385
15	SWITCH, DOOR	632205	632205	632205	632205	632205	632205
16	TRAP ASSEMBLY	477600	477600	477600	477600	477600	477600
17	VENT SAFETY LIMIT SWITCH	626389	626389	626389	626389	626389	626389
18	ROLL OUT LIMIT SWITCH	626422	626422	626422	626422	626422	626422